

Title (en)
FREQUENCY LOCKING RADIATION BEAMS

Publication
EP 0235919 B1 19900905 (EN)

Application
EP 87300691 A 19870127

Priority
• GB 8602015 A 19860128
• GB 8602016 A 19860128

Abstract (en)
[origin: WO8704571A1] A method and apparatus for locking the frequencies of a number of first beams of coherent radiation from respective sources (17). Typically, the sources (17) will form local oscillators in respective transmitters (1). The apparatus comprises a reference beam generator (10) such as a HeNe laser which generates a primary reference beam fed to an interferometer (12) which generates a second, reference beam composed of a number of reference frequencies. This second reference beam is caused to interfere with each of the beams from the local sources (17) in an optical coupler (16) and the resultant beam is detected with a photodiode (22). The electrical output signal of the photodiode (22) is filtered and fed to a discriminator (25) which controls the frequency of the local laser (17). The discriminator (25) controls the laser (17) to maintain the relationship between the frequencies of the laser (17) and the reference laser (10) substantially constant.

IPC 1-7
G02F 2/00; H01S 3/137; H04B 10/12; H04J 14/02

IPC 8 full level
H01S 3/13 (2006.01); **G01J 9/02** (2006.01); **G01J 9/04** (2006.01); **G02F 2/00** (2006.01); **H01S 3/137** (2006.01); **H01S 3/139** (2006.01); **H01S 5/00** (2006.01); **H01S 5/068** (2006.01); **H04B 10/00** (2006.01); **H04B 10/12** (2006.01); **H04B 10/155** (2006.01); **H04J 14/02** (2006.01); **H01S 5/0687** (2006.01)

CPC (source: EP US)
G02F 2/00 (2013.01 - EP US); **H01S 3/1394** (2013.01 - EP US); **H01S 5/0014** (2013.01 - EP US); **G01J 9/0246** (2013.01 - EP US); **G01J 9/04** (2013.01 - EP US); **H01S 5/0687** (2013.01 - EP US)

Cited by
US5010587A; AT405446B; EP1253730A3; US5396361A; GB2293684A; GB2293684B

Designated contracting state (EPC)
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
WO 8704572 A1 19870730; AT E56320 T1 19900915; AT E59738 T1 19910115; CA 1278023 C 19901218; CA 1320532 C 19930720; DE 3764672 D1 19901011; DE 3766850 D1 19910207; EP 0235919 A1 19870909; EP 0235919 B1 19900905; EP 0235920 A1 19870909; EP 0235920 B1 19910102; ES 2018258 B3 19910401; ES 2020559 B3 19910816; GR 3000840 T3 19911115; GR 3001346 T3 19920831; JP H0831648 B2 19960327; JP S63502391 A 19880908; US 4817100 A 19890328; US 4955026 A 19900904; WO 8704571 A1 19870730

DOCDB simple family (application)
GB 8700049 W 19870127; AT 87300691 T 19870127; AT 87300692 T 19870127; CA 528313 A 19870127; CA 528316 A 19870127; DE 3764672 T 19870127; DE 3766850 T 19870127; EP 87300691 A 19870127; EP 87300692 A 19870127; ES 87300691 T 19870127; ES 87300692 T 19870127; GB 8700048 W 19870127; GR 900400670 T 19900918; GR 910400054 T 19910121; JP 50096687 A 19870127; US 10759487 A 19871112; US 11656587 A 19870127